UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,428	11/26/2003	Johnny Zhong	15436.134.1	9868

7590 07/29/2005

R. BURNS ISRAELSEN
WORKMAN HYDEGGER
1000 Eagle Gate Tower
60 East South Temple
Salt Lake City, UT 84111

EXAMINER	
THOMAS, BRANDI N	

ART UNIT	PAPER NUMBER
2873	

DATE MAILED: 07/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/724,428	ZHONG ET AL.	
	Examiner	Art Unit	
	Brandi N. Thomas	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment filed on 5/3/05*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *Detailed Action*.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 7-16, and 23-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashizume et al. (US 2003/0169507A1).

Regarding claim 1, Hashizume et al. discloses, in figures 4, 7, 10, and 11, a method of manufacturing optical components comprising: selecting a plurality of optical blocks (blocks 611-618 and blocks 621-628) for an optical component (1000) (sections 0063 and 0070), wherein at least a portion of the plurality of optical blocks (blocks 611-618 and blocks 621-628) have thin-films (RB and RR) disposed on at least one face (Sa and Sc) (sections 0062 and 0067); arranging the optical blocks (blocks 611-618 and blocks 621-628) to permit optical signals to impinge at least a portion of the thin-films (RB and RR) (sections 0078 and 0080), wherein an attachment face (Sa and Sb) of each optical block (blocks 611-618) is adjacent an attachment face (Sc and Sd) of another optical block (blocks 621-628) (figure 8); and fusing the plurality of optical blocks (blocks 611-618 and blocks 621-628) together where an attachment face (Sa and Sc) is adjacent another attachment face (Sb and Sd) to form an optical component (1000) (sections 0071 and 0074) (figure 11).

Regarding claim 2, Hashizume et al. discloses, in figures 4, 7, 10, and 11, a method of manufacturing optical components, wherein arranging the optical blocks (blocks 611-618 and blocks 621-628) to permit optical signals to impinge at least a portion of the thin-films (RR and RB) comprises arranging the optical blocks (blocks 611-618 and blocks 621-628) such that a first thin-film (RB) on a first optical block (blocks 611-618) is diagonally opposed to a second thin film (RR) on a second optical block (blocks 621-628) (figure 8).

Regarding claim 3, Hashizume et al. discloses, in figures 4, 7, 10, and 11, a method of manufacturing optical components, further comprising forming the plurality of optical blocks (blocks 611-618 and blocks 621-628) by: depositing a thin-film (RR and RB) on a glass substrate (600) (sections 0059 and 0074); and dicing the thin film (RR and RB) and glass substrate (600) to form optical blocks (blocks 611-618 and blocks 621-628) that have thin-films (RB and RR) on a least one face (Sa, Sb, Sc and Sd) of each optical block (blocks 611-618 and blocks 621-628) (sections 0062, 0067, and 0074).

Regarding claim 4, Hashizume et al. discloses, in figures 4, 7, 10, and 11, a method of manufacturing optical components, wherein selecting a plurality of optical blocks (blocks 611-618 and blocks 621-628) for an optical component (1000) comprises: growing a thin-film (RR and RB) on a glass substrate (600) (sections 0059 and 0074); and dicing the thin film (RR and RB) and glass substrate (600) to form optical blocks (blocks 611-618 and blocks 621-628) that have thin-films (RB and RR) on a least one face (Sa, Sb, Sc and Sd) of each optical block (blocks 611-618 and blocks 621-628) (sections 0062, 0067, and 0074).

Regarding claim 5, Hashizume et al. discloses, in figures 4, 7, 10, and 11, a method of manufacturing optical components, wherein fusing the plurality of optical blocks (blocks 611-

618 and blocks 621-628) comprises: polishing each of the optical blocks (blocks 611-618 and blocks 621-628) (sections 0009 and 0010) on at least one attachment face (Sb and Sd); and pressing the attachment face (Sa and Sb) of the each optical block (blocks 611-618) to the attachment face (Sc and Sd) on an adjacent optical block (blocks 621-628) (sections 0061, 0062, 0066, and 0068).

Regarding claim 7, Hashizume et al. discloses, in figures 4, 7, 10, and 11, a method of manufacturing optical components, wherein the first thin film (RB) and the second thin film (RR) have substantially the same optical properties (section 0010).

Regarding claim 8, Hashizume et al. discloses, in figures 4, 7, 10, and 11, a method of manufacturing optical components, wherein the first thin film (RB) and the second thin film (RR) have different optical properties (sections 0019 and 0020).

Regarding claim 9, Hashizume et al. discloses, in figures 4, 7, 10, and 11, an optical component (1000) comprising: a first optical block (blocks 611-618) (section 0063) (figure 7) comprising: a first thin-film (RB) on at least one face (Sa) of the first optical block (blocks 611-618) (section 0062); and a first attachment face (Sc); a second optical block (blocks 621-628) (section 0070) (figure 10) comprising: a second thin-film (RR) on at least one face (Sc) of the second optical block (blocks 621-628); and a second attachment face (Sc) that is fused to the first attachment face (Sb) (section 0071) (figure 11) to allow light to impinge the first and second thin films (RB and RR) (sections 0078 and 0080).

Regarding claim 10, Hashizume et al. discloses, in figures 4, 7, 10, and 11, an optical component (1000), wherein the first thin film (RB) and the second thin film (RR) have substantially the same optical properties (section 0010).

Regarding claim 11, Hashizume et al. discloses, in figures 4, 7, 10, and 11, an optical component (1000), wherein the first thin film (RB) and the second thin film (RR) have different optical properties (sections 0019 and 0020).

Regarding claim 12, Hashizume et al. discloses, in figures 4, 7, 10, and 11, an optical component (1000), wherein at least one of the first and second thin-films (RB and RR) is configured to allow a specified wavelength of light to pass through the thin-film while reflecting other wavelengths of light (section 0007).

Regarding claim 13, Hashizume et al. discloses, in figures 4, 7, 10, and 11, an optical component (1000), wherein at least one of the first and second thin-films (RB and RR) is configured to reflect a specified wavelength of light while allowing other wavelengths of light to pass through the thin-film (section 0007).

Regarding claim 14, Hashizume et al. discloses, in figures 4, 7, 10, and 11, an optical component (1000), wherein at least one of the first and second thin-films (RB and RR) is configured to reflect a plurality of wavelengths of light while allowing other wavelengths of light to pass through the thin-film (RB and RR) (section 0118).

Regarding claim 15, Hashizume et al. discloses, in figures 4, 7, 10, and 11, an optical component (1000), wherein at least one of the first and second thin-films (RB and RR) is configured to allow a plurality of wavelengths of light to pass through the thin-film while reflecting other wavelengths of light (section 0118).

Regarding claim 16, Hashizume et al. discloses, in figures 4, 7, 10, and 11, an optical component (1000), wherein the first and second thin-films (RB and RR) are diagonally opposed to each other (figure 12).

Regarding claim 23, Hashizume et al. discloses, in figures 4, 7, 10, and 11, a method of manufacturing an optical component (1000) comprises: disposing a thin film (RR and RB) on an optical substrate (600), the thin film having optical properties (sections 0010, 0019, and 0020); dicing the substrate (600) to form optical blocks (blocks 611-618 and blocks 621-628); polishing attachment faces (Sa and Sc) on the optical blocks (blocks 611-618 and blocks 621-628) (sections 0009 and 0010); and fusing the optical blocks (blocks 611-618 and blocks 621-628) at the attachment faces (Sa, Sb, Sc, and Sd) to form an optical component (1000) having a function that is related to optical properties of the thin film disposed on the substrate (600) (sections 0071 and 0074) (figure 11).

Regarding claims 24 and 25, Hashizume et al. discloses, in figures 4, 7, 10, and 11, a method of manufacturing an optical component, wherein disposing a thin film on an optical substrate (600) comprises growing a thin-film (RR and RB) on the optical substrate (600) (sections 0059 and 0074).

Regarding claim 26, Hashizume et al. discloses, in figures 4, 7, 10, and 11, a method of manufacturing an optical component, further comprising arranging the optical block that thin films (RR and RB) on the optical blocks (blocks 611-618 and blocks 621-628) are diagonally opposed to each other (figure 8).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 6, 17-22, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashizume et al. (US 2003/0169507A1) as applied to claim 1 above, and further in view of Grasis et al. (6167171).

Regarding claims 6 and 27, Hashizume et al. discloses, in figures 4, 7, 10, and 11, a method of manufacturing optical components including an optical component (1000) except that it does not show at least one of an optical add/drop module, an optical multiplexer, an optical demultiplexer, an optical tap, an optical add module and an optical drop module. Grasis et al. shows that it is known to provide at least one of an optical add/drop module, an optical multiplexer, an optical demultiplexer, an optical tap, an optical add module and an optical drop module (figure 1) for carrying multi-channel wavelength multiplexed light (col. 4, lines 63-67). Therefore it would have been obvious to someone of ordinary skill in the art at the time the invention was made to combine the device of Hashizume et al. with the optical multiplexer of Grasis et al. for the purpose of carrying multi-channel wavelength multiplexed light (col. 4, lines 63-67).

Regarding claims 17 and 22, Hashizume et al. discloses, in figures 4, 7, 10, and 11, a method of processing a multiplexed light signal comprising: first and second blocks (blocks 611-618 and blocks 621-628); fusing an attachment face (Sb) of the first optical block (blocks 611-618) with an attachment face (Sd) of the second optical block (blocks 621-628) (section 0071) (figure 11); including a first thin-film (RB) disposed on the first optical block (blocks 611-618); and a second thin-film (RR) disposed on the second optical block (blocks 621-628) (sections 0062 and 0067) except that it does not show arranging first and second optical blocks to allow

the multiplexed light signal to pass through the first and second optical blocks (col. 10, lines 40-43 and col. 11, lines 51-54); inputting the multiplexed light signal into the first optical block (52) (col. 10, lines 40-43); reflecting at least one channel of the multiplexed light signal toward the second optical block (152) (col. 11, lines 51-54) reflecting at least one channel of the multiplexed light signal (col. 11, lines 55-60).

Regarding claim 18, Hashizume et al. and Grasis et al. teach the claimed invention disclosed above. However, Grasis et al. further comprises, in figure 1, collimating the at least one channel of the multiplexed light signal (58) allowed to pass through the first optical block (52) into a first fiber-optic cable (26) (col. 10, lines 40-43 and 58-60).

Regarding claim 19, Hashizume et al. and Grasis et al. teach the claimed invention disclosed above. However, Grasis et al. further comprises, in figure 1, adding a channel (116) at the second optical block (152) to combine with the multiplexed light signal (col. 11, lines 53-55).

Regarding claim 20, Hashizume et al. discloses, in figures 4, 7, 10, and 17, a method of processing a multiplexed light signal, wherein the first optical block is fused to the second optical block via at least one intermediary optical block (section 0071) (figure 17).

Regarding claim 21, Grasis et al. discloses, in figures 1, a method of processing a multiplexed light signal wherein reflecting at least one channel of the multiplexed light signal toward a second optical block comprises reflecting the at least one channel of the multiplexed signal in a direction diagonally opposed to the first thin-film disposed on the first optical block (figure 1) (col. 11, lines 51-54).

Response to Arguments

5. Applicant's arguments filed 5/3/05 have been fully considered but they are not persuasive. In regards to claims 1-27, Hashizume discloses thin-films (RR and RB) are disclosed on a face of the plurality of blocks (sections 0062 and 0067) (figures 6 and 9). In regards to an attachment face, Hashizume discloses attachment faces Sa-Sd (sections 0071 and 0074). In regards to fusing of the optical block, figure 8 illustrates the plurality of optical block fused together.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandi N. Thomas whose telephone number is 571-272-2341. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BNT

BNT

RICKY L. MACK
PRIMARY EXAMINER